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Christchurch City Council submission on Te hau mārohi ki anamata - Transitioning to a low-emissions climate-resilient future

Christchurch City Council (the Council) thanks the Ministry for the Environment for the opportunity to provide comment on the *Te hau mārohi ki anamata - Transitioning to a low-emissions climate-resilient future* discussion document.

Please find attached the Council's response to the questions contained in the discussion document.

For any clarification on points within this submission please contact Tony Moore, Climate Resilience Lead (tony.moore@ccc.govt.nz).

Yours faithfully

Lianne Dalziel

Mayor of Christchurch

Christchurch City Council

Christchurch City Council response to Te hau mārohi ki anamata - Transitioning to a low-emissions climate-resilient future. Ministry for the Environment, New Zealand Government. November 2021

Introduction

The Council would like to acknowledge the importance of this document and the significance of preparing the first holistic emissions reduction plan for New Zealand. We would like to thank the staff involved in preparing this document and for engaging with New Zealanders about this important topic. We also congratulate the government on the recently announced increase to the country's Nationally Determined Contribution (NDC). It is important that New Zealand plays its part in global efforts to reduce emissions and this higher target is more aligned to this, and the latest science from the Intergovernmental Panel on Climate Change. The updated NDC is more closely aligned to targets set by the Christchurch City Council after consultation with our community.

We believe local government is ideally positioned to partner with the central government to reduce greenhouse gas emissions - to improve public transport networks, increase cycling and walking, create greener, low-emission neighbourhoods, and to minimise waste. This has long been a priority for the Council, and we look forward to working closely with central government on these shared priorities in the future.

Increased ambition

The Council encourages greater ambition in the final Emissions Reduction Plan (the Plan). We are concerned that the current suite of planned policies suggested in the consultation document leave a large gap between expected reductions, and those required to meet the emissions budgets. There needs to be a greater focus on reducing emissions through domestic efforts, rather than accepting we will miss targets and need to buy international offsets. We believe that offsetting up to 66% of New Zealand's greenhouse gas emissions does not represent a fair or reasonable contribution to global efforts. Publishing a Plan that your own modelling estimates would miss the 7.7 Mt CO2 -e reduction target by between 2.1 and 5.1 Mt CO2-e (i.e. miss the target by up to 2/3) would do little to provide confidence to local government, the private sector, and the public, that the government is committed to the changes necessary to address the climate emergency. The Christchurch City Council supports strong climate action and is ready to partner with the government on its emissions reduction efforts.

Lack of clarity and certainty

The consultation document does not provide a clear direction for how New Zealand should reduce its emissions. The Christchurch City Council eagerly awaited the release of this important document, to help provide clear direction for New Zealand and to inform our Council efforts to reduce emissions. The Council recently adopted Kia tūroa te Ao – Ōtautahi Christchurch Climate Resilience Strategy 2021. One key action is to develop an emissions reduction pathway for our district. However, this consultation document does not provide the needed clarity for the Council or our community to help guide development of that plan. Rather, the consultation document provides a list of current actions and policies, and lists potential options being explored by government (most of which have already been consulted on by the Productivity Commission, Climate Commission and other agriculture, waste and transport consultations), with little information about how actions will be implemented, or which should be prioritised.

Local government's role in delivering the plan

Local government is ready and willing to take an active role in reducing emissions from its own operations and to support local communities to reduce their emissions. To achieve this, central government must provide the enabling polices, frameworks and incentives (as well as disincentives

where necessary), that can drive national action and support local implementation. To achieve the pace and scale of change needed to reach our targets, we need a coordinated and aligned effort. Partnerships and clear roles and responsibilities will be vital.

It is unclear who would be better placed than local government to help deliver on some of the major initiatives outline in the discussion document. Partnering with iwi/Māori and the private sector are rightfully highlighted as important, but we believe that local governments' role has not been sufficiently acknowledged. Local government will be crucial to the successful implementation of many the proposed policies and actions in the document, especially the transportation, urban planning, waste, forestry, and just transition sections, and more detail on how this will occur, and on funding implications is required in the final plan.

However, it seems that references to partnerships with local government are lacking and are almost written as an afterthought – where they are included at all. For example, the funding and finance section (p.35) could include reference to funding local government to (co)deliver projects or programmes in pursuit of the plan's goals.

The Council supports enabling national legislation which would enable Councils greater flexibility to introduce policies locally (including things like pricing, road reallocation, congestion charges etc.), to help address emissions in a way that would work for our communities.

From a legal perspective, the Council advocates for more detail in the final Emissions Reduction Plan about the role of local government in the plan's implementation. Legislation requires the Ministry for the Environment to include this level of detail:

- Section 5ZN(c) of the Climate Change Response Act 2002 provides

  5ZN 2050 target and emissions budget are permissive considerations

  If they think fit, a person or body may, in exercising or performing a public function, power, or duty conferred on that person or body by or under law, take into account—

  …

  (c) an emissions reduction plan.
- Council is a body that exercises or performs public functions, powers or duties under law.
- Therefore the emissions reduction plan will be a permissive consideration for Council when exercising its functions.
- If the Emissions Reduction Plan is insufficiently detailed on local government's role in implementing the plan, then Council is unable to incorporate the Emissions Reduction Plan into its decision-making, even if it wanted to do so.
- If the Ministry for the Environment fails to provide sufficient detail in the Emissions Reduction Plan for local government (or public decision makers), it will be frustrating Parliament's intention when they legislated this provision.

Council also requests that the Plan recommend that the Minister for Local Government issue guidance under s 5ZO for the Department of Internal Affairs to take a more active and coordinating role in assisting local government to achieve emissions reductions, and to ensure consistency of approach between local governments. The Department of Internal Affairs has issued policy documents on climate change to-date, however these largely focus on adaptation and resilience, rather than emissions reductions.

Funding

The consultation document provides little detail on funding for key proposals and policies suggested to help reduce emissions – despite stating that '*climate change requires a step change in how we*

approach financing' (page 34). Without more certainty around funding commitments from central government, it is unlikely that local government or the private sector will have confidence to increase their own climate commitments.
It is noted that currently proposed policies will leave a significant gap between actual emissions reductions, and our international commitments (our NDC), which will require enormous amounts to be paid towards international offsets in the future (estimates of $1billion per year quoted in media). We would prefer that the central government invest a higher proportion of that money in New Zealand now to drive greater emissions reductions at home.
Streamlining funding for initiatives such as cycleways would help empower local government to speed delivery of much needed infrastructure that will help decrease emissions. Our experience in receiving shovel ready funding was much better than the process to access transport funding through Waka Kotahi – which has an unnecessarily long lead times, and funding is often not well-aligned with local (or national) emissions reduction goals.
While it is crucial that funding is directed towards initiatives which enable people to reduce their emissions (such as cycleways), it is just as vital to stop funding things which will result in increased emissions. For example, continuing to fund additional lanes on highways will not incentivise people to use their car less, or switch to public transport.
The Christchurch City Council also notes that the recently released National Land Transport Programme 2021 to 2024, allocated $2.8 billion for public transport in Auckland, $1.2b for Wellington and only $246m in Christchurch. As New Zealand's second largest city, we would like to see far greater funding for public transport in the future, in order to assist with emission reduction efforts.

Policy alignment

The Council would like to see greater co-ordination of policy direction across central government relating to emissions reduction. Presently there are seemingly conflicting outcomes sought from various policy statements on transport and urban development which impede real progress being made to reduce emissions. For example, enabling continued greenfield sprawl without requiring public transport links means people having to drive further and further to work which increases emissions and congestion. Even the recent announcement to allow three storey residential units anywhere in the city is likely to lead to 'scattered intensification', which undercuts efforts elsewhere to focus intensification around integrated public transport routes. It's not clear enough in the consultation document how work on the emissions reduction plan is aligning with other work programmes, in particular the reform of the Resource Management system, work on the National Policy Statement-Urban Development and development of the National Adaptation Plan.

Prioritise actions and evidence based decision making

The Draft Emission Reduction Plan does not prioritise actions or programmes of work, and only lightly touches on dependencies and the sequencing of activities. To build a robust programme government will need to identify which actions are able to deliver the greatest emission reductions, for the least cost and the greatest co-benefit. Identifying impactful actions and quick wins together with a clear view of dependencies and sequencing, will help to build momentum and confidence for implementation of the Plan. Council also supports the principles proposed in this Plan, (e.g. for a just transition, to be evidence based, to be ambitious, to uphold Te Tiriti principles and promote co-benefits), however it is not clear how these lenses have, or will be applied.

Raising minimum standards

In 2020 the government (along with the Christchurch City Council and many other local authorities), declared a climate emergency. While we acknowledge the need for good public policy to include incentives and education to encourage 'better' voluntary choices, we believe higher regulatory standards are needed across a range of products to meet the urgency of the crisis. For example, higher standards are needed for vehicle emissions, buildings, appliances and electronic equipment, waste and F-gases.

Higher minimum standards are required for products which produce greenhouse gas emissions (either directly like car exhaust emissions, or indirectly through electricity consumption), especially where there are lower emission options available at similar prices. More efficient products will save consumers money over time, and reduce emissions.

Efficiency standards need to be regularly reviewed to ensure that standards are keeping pace with technical advancements, and the falling price of alternative products. For example, in the last decade the price has rapidly dropped for LED lightbulbs (which last much longer and use far less energy than incandescent bulbs). This now means consumers can replace old incandescent bulbs with LED bulbs and recover the additional purchase price from electricity bill savings in one year, while reducing their (and the country's) carbon footprint. Therefore, it may be time to set a date for ceasing the sale of inefficient incandescent lightbulbs.
Banning the sale of the highest emitting products, where comparative lower emitting products are available such as for F-gases, will also be needed to eliminate harmful and outdated products.

Questions by section	Council Response
Meeting the net-zero challenge	
Transition pathway	
1. Do you agree that the emissions reduction plan should be guided by a set of principles? If so, are the five principles set out above, the correct ones? Please explain why or why not.	We support the set of principles guiding the development of the Emissions Reduction Plan. The Christchurch City Council considers 'A fair, equitable and inclusive transition' to be an especially important principle, which needs to be embedded throughout the final Emissions Reduction Plan (the Plan).
2. How can we enable further private sector action to reduce emissions and help achieve a productive, sustainable and inclusive economy? In particular, what key barriers could we remove to support decarbonisation?	The private sector requires certainty from government policies to give it the confidence to invest. The private sector will not want to shoulder the burden of transition without significant government support. The government needs to significantly increase funding towards climate action, to signal it's a serious partner for private investors. Page 14 states 'no additional policies' under the Finance and Funding section – this will not build any confidence that the government is serious about increasing the investment to accelerate emissions reduction efforts. The ETS also needs to be reformed with a hard cap on units which match our emissions budgets. This will increase the price of units and make the private sector consider decarbonisation options earlier than if the government artificially delays the pain of price increases on carbon polluting industries.
3. In addition to the actions already committed to and the proposed actions in this document, what further measures could be used to help close the gap?	The government needs to lead boldly and display some urgency. Delaying the emissions reduction plan sends the signal that it's not really a government priority. Until the government starts investing heavily in renewable energy and low emission transport, and address agricultural emissions, the country will continue to lock itself into a high emissions future. The percentage of renewable energy is actually dropping, and the

	government is still increasing funding for fossil fuel transport options at a higher rate than for active and public transport. New Zealand is losing credibility as a leader on climate action and we will miss opportunities if we continue to prioritise other areas ahead of decarbonising the economy.
4. How can the emissions reduction plan promote nature-based solutions that are good for both climate and biodiversity?	Do more to incentivise permanent native forests as a way to sequester carbon and make it easier to enter native regeneration into ETS.
5. Are there any other views you wish to share in relation to the Transition Pathway?	We are disappointed not to see an actual emissions reduction plan instead of a high level transition pathway.
Helping sectors adapt	
6. Which actions to reduce emissions can also best improve our ability to adapt to the effects of climate change?	Increasing and retaining native forest and wetlands.
7. Which actions to reduce emissions could increase future risks and impacts of climate change, and therefore need to be avoided?	There are few risks
Working with our Tiriti partners	
8. The Climate Change Commission has recommended that the Government and iwi/Māori partner on a series of national plans and strategies to decarbonise our economy. Which, if any, of the strategies listed are a particular priority for your whānau, hapū or iwi and why is this?	Given Ngāi Tahu has the largest Takiwā of any iwi across Aotearoa, we should expect that Ngāi Tahu are intimately involved in working with the Crown in further developing the National level input of Iwi/Māori toward developing the various strategies in relation to the NZ Emissions Reduction Plan, and in particular toward addressing Māori-led or Māori oriented solutions for some of the strategies. This is fundamental to the Ngāi Tahu perspective of Te Ao Māori and Mātauranga Māori within its Takiwā. Whilst some strategies are more relevant for stronger Māori engagement than others, we don't think there are any that would be excluded from input.
9. What actions should a Māori-led transition strategy prioritise? What impact do you think these actions will have for Māori generally or for our emission reduction targets? What impact will these actions have for you?	Actions which focus on building capacity, increase funding opportunities, and reduce inequities for Māori should be prioritised.
10. What would help your whanau, community, Māori collective or business to participate in the development of the strategy?	More resourcing would help Māori participate in the process. Māori at local authority/regional level have little/no capacity to engage, partner, co-design or collaborate

	with local/regional authorities primarily because of that lack of resourcing (funding, capacity, inequities). Whatever is developed nationally to support and resource Māori must be replicated at local level. Notwithstanding these fundamental flaws, Maori-led, or Māori specific and affordable strategies must be driven on a 'By Māori for Māori context with aligned support mechanisms from national and local/regional authority levels. The Te Ao Māori and Mātauranga Māori perspective is equally important to the sciences and technical viewpoint, and when combined, new possibilities emerge for the willing.
11. What information would your Māori collective, community or business like to capture in an emissions profile? Could this information support emissions reductions at a whanau level?	Whilst there is a focus here on outcomes specifically for Māori, there are, under a true Te Tiriti partnership, mutually beneficial economic, leadership and kaitiaki obligations to realise mutually beneficial economic opportunities.
12. Reflecting on the Commission's recommendation for a mechanism that would build strong Te Tiriti partnerships, what existing models of partnership are you aware of that have resulted in good outcomes for Māori? Why were they effective?	In acknowledging the intent of the Crown to embed Te Tiriti o Waitangi principles into future emissions reduction plans, the Crown must give clear guidance to local authorities as to what obligations this imposes at local/regional authority level when planning and delivering localised strategies, particularly in respect to the level of resourcing (funding) that a local/regional authority is expected to provide to assist Māori to partner, engage and continue collaboration throughout planning and implementation. Similarly, local/regional authorities need to be ready to change the way they do business to incorporate a broader partner base, but particularly toward accepting the roles and obligations of working as partners and collaborating with Māori.
Making an equitable transition	
The Commission recommends developing an Equitable Transitions Strategy that addresses the following objectives: partnership with iwi/Māori, proactive transition planning, strengthening the responsiveness of the education system, supporting workers in transition, and minimising unequal impacts in all new policies. 13. Do you agree with the objectives for an Equitable Transitions Strategy as set out by the Climate Change Commission? What additional objectives should be included?	We agree with the objectives of the Equitable Transition Strategy as described. However, we consider that developing the Equitable Transition Strategy separately from the Emissions Reduction Plan potentially allows a Plan to be developed which is inconsistent with the goals of an equitable transition. The Emissions Reduction Plan should have an equitable transition as one of its core principles – and all actions and policies included in the Plan should also have been considered through that lense before being included. Pathways or policies that undermine an equitable transition should not be included.

14. What additional measures are needed to give effect to the objectives noted by the Climate Change Commission and any other objectives that you think should be included in an Equitable Transitions Strategy?	There also needs to be regular monitoring and reporting on the impacts of the transition, to ensure the actual real world impacts are assessed, and our approach can be constantly improved for affected communities and sectors.
The Commission suggests that the Equitable Transitions Strategy should be co-designed alongside iwi/Māori, local government, regional economic development agencies, businesses, workers, unions, the disability community and community groups. 15. What models and approaches should be used in developing an Equitable Transitions Strategy to ensure that it incorporates and effectively responds to the perspectives and priorities of different groups?	We agree the Equitable Transition Strategy needs to be created in partnership with Māori, but also needs to include input from all sectors of society to be effective. The more views it incorporates, the more effective it will be for society as a whole.
16. How can Government further support households (particularly low-income households) to reduce their emissions footprint?	Provide easy to understand information on where most emissions come from and a few basic (and affordable) things people can do to reduce their footprint. But most importantly, the government is in the unique position of being able to provide or fund low-emissions alternatives for the public. For example – incentives for active travel (e.g. electric bikes for each household), funding public transport improvements or cycleways which provide people low-emission alternatives to driving fossil fuel vehicles. Decarbonising the electricity grid is another action which would enable families to lower their carbon footprint.
17. How can Government further support workers at threat of displacement to develop new skills and find good jobs with minimal disruption?	Provide free training, and boost apprenticeships for new low-emission jobs.
18. What additional resources, tools and information are needed to support community transition planning?	Community based approaches will be required in areas where employment is dominated by high emission industries. The government may need to incentivise suitable low-emission firms to locate to regions where there will be high employment needs.
19. How could the uptake of low-emissions business models and production methods be best encouraged?	Incentives could be provided for businesses that rapidly transition to low-emission alternatives. Greater support could also be provided to social enterprises which focus on helping the transitions to a low emission, circular economy. For example,

	Kilmarnock Enterprises in Christchurch employs people to provide local recycling solutions, including stripping old computers and electrical equipment.
20. Is there anything else you wish to share in relation to making an equitable transition?	
Aligning systems and tools	
Government accountability and coordination	
21. In addition to the Climate Change Commission monitoring and reporting on progress, what other measures are needed to ensure government is held accountable?	It is vital that all government departments / agencies are required to produce emission reduction plans that align with NZ emission budgets and targets. For example, the Ministry of Transport released a discussion document earlier this year proposing four potential options to reduce transport emissions – yet three of the four options were insufficient to meet its own targets. Such plans should no longer even be considered.
22. How can new ways of working together like mission-oriented innovation help meet our ambitious goals for a fair and inclusive society and a productive, sustainable and climate-resilient economy?	Mission orientated goals enable innovative ideas to solve complex problems. We support this approach as it allows a number of options to be explored without pre-determining the types of actions which would best achieve the goal, opening new opportunities and pathways.
23. Is there anything else you wish to share in relation to government accountability and coordination?	It is vital that we have an ambitious, coordinated and aligned whole-of-government response to climate change. Climate change will affect every ministry in some way, so enabling frameworks, capability building and tools are needed to help ministers and staff across the different ministries to adopt consistent approaches. These approaches should be shared so regional and local government and business sectors may also benefit (for example procurement guidelines, cost benefit analysis, decision support tools and monitoring and reporting approaches). The Council fully supports central government leadership shown through the Carbon Neutral Government Programme. This will have numerous benefits and will be an important catalyst for business through government procurement and contracting efforts.
Funding and financing	
24. What are the main barriers or gaps that affect the flow of private capital into low-emissions investment in Aotearoa?	Lack of incentives from the government for investing in low-emission solutions, combined with those who continue to invest in high emitting sectors being effectively sheltered from the true costs of the harm they perpetuate through high emissions. If the costs of pollution don't fall on polluters (or investors), they will be less willing to change. If it is cheaper to simply purchase offsets at an artificially low price than to pay for the true

	cost of emissions, businesses are unlikely to be pro-active in reducing their emissions. Currently the government is focusing all of its offsetting efforts towards forestry. However, offsetting using projects that reduce emissions, increases significantly the number of opportunities to limit domestic emissions. For example, the Burwood Landfill Gas project that has successfully been powering civic buildings in Christchurch since 2010 was supported through the Government's Projects to Reduce Emissions scheme. Such approaches will directly encourage innovation and investment in the solutions needed.
25. What constraints have Māori and Māori collectives experienced in accessing finance for climate change response activities?	
26. What else should the Government prioritise in directing public and private finance into low-emissions investment and activity?	Government needs to lead the way by clearly showing where it intends to invest itself, and inviting others to join it. Otherwise it needs to provide incentives (e.g. tax, subsidies etc.) to make investment in low-emission technology more attractive than continued investment in high emissions industries.
27. Is there anything else you wish to share in relation to funding and financing?	On page 34, your opening statement on Funding and Financing is that 'Climate change requires a step change in how we approach financing', and yet no new policies for funding are provided in the document. The summary on page 14 simply states the Emissions Reduction Plan will reflect work currently underway. Funding and Financing will ultimately underpin the entire effort to reduce emissions in New Zealand, so this approach is unlikely to lead to significant change in the public or private sector.
Emissions pricing	
General Comments	Government control of the emissions price in New Zealand is not letting the market adequately reflect and respond to this price. For a market mechanism to work it needs to be determined by the market place. We suggest removing the artificial ceiling on the New Zealand carbon price to help drive innovation and a low emission economy.
28. Do you have sufficient information on future emissions price paths to inform your investment decisions?	No - local government does not have sufficient guidance on price expectations and so is less able to take this into account in decision making. We support the submission recommendation from Taituarā, which calls for 'the publication and regular review of long-term abatement values based on the price of carbon' to help local government and others inform their investment decisions.

	As an example, current government estimates and guidance appears to be outdated, because the price is currently higher than the forecasts and forecasts vary greatly (e.g. Parliamentary Commission for the Environment medium ambition $50 per tonne CO2-e, MFE upper range $50 per tonne CO2-e, yet the current NZ price is $65 per tonne CO2-e from CommTrade).
29. What emissions price are you factoring into your investment decisions?	The Council is looking to develop a policy to incorporate carbon pricing into investment decisions. Local government needs better decision support tools and cost benefit analysis tools, to more consistently factor in the future cost of carbon and climate implications of decision-making. This is especially needed when long-term investments are being made. For cost effective delivery, these tools could be developed nationally and then shared throughout New Zealand.
30. Do you agree the treatment of forestry in the New Zealand Emissions Trading Scheme (NZ ETS) should not result in a delay, or reduction of effort, in reducing gross emissions in other sectors of the economy?	We agree that gross emissions reductions should be the focus of government policy, with offsets from forestry only used for residual emissions in hard to abate sectors.
31. What are your views on the options presented above to constrain forestry inside the NZ ETS? What does the Government need to consider when assessing options? What unintended consequences do we need to consider to ensure we do not unnecessarily restrict forest planting?	We agree that there should be limits introduced for the number of forestry units surrendered from non-forestry participants under the ETS. Increasing the value of units for permanent native forest compared to exotic forestry may also incentivise more long term sequestration.
32. Are there any other views you wish to share in relation to emissions pricing?	Government control of the emissions price in New Zealand is not letting the market adequately reflect and respond to the true price of carbon. For a market mechanism to work it needs to be determined by the market place. We suggest removing the artificial ceiling on the New Zealand carbon price to help drive innovation and a low emission economy.
Planning	The form and location of residential development has a great influence on the long-term emissions from a city. Well-located residential intensification, for example around key activity centres, which have a diversity of work, retail, recreational and transport opportunities nearby, would enable people to more easily access their daily needs. Current moves for wholesale and distributed intensification could undermine the thoughtful location of people and so drive up emissions because of the

	increased need to travel (e.g. changes imposed by the Resource Management (HUD) Amendment Bill. In addition, encouraging intensification in locations known to be vulnerable to sea level rise or flooding, would ultimately result in greater risks for the community and greater levels of emissions when these buildings and infrastructure needed to be repaired or ultimately moved due to hazards. However, most of these areas should be addressed by National Policy Statement – Urban Design Qualifying Matters. Abolishing the need for green outdoor spaces around buildings will exacerbate flood risks, through the increase of impervious surfaces, add to urban overheating (as shade and greenspaces cool neighbourhoods), and is counter to restoring nature and supporting wellbeing in our cities. These points and more, were made in the Council's submission on the proposed Resource Management (HUD) Amendment Bill. But they reinforce the need to have policy alignment when it comes to reducing emissions and growing resilience. The government needs to be a leader in sustainable developments itself. Kāinga Ora has made good progress in its new developments, and more could be done to trial innovate new ideas in its developments.
33. In addition to resource management reform, what changes should we prioritise to ensure our planning system enables emissions reductions across sectors? This could include partnerships, emissions impact quantification for planning decisions, improving data and evidence, expectations for crown entities, enabling local government to make decisions to reduce emissions.	The Emissions Reduction Plan Discussion Document notes that the extent of the current emissions impact of urban areas is unknown (p.42). We would strongly advise that this data is collated, so that impacts of intensification on emissions profiles can be better understood and addressed. The Emissions Reduction Plan should also contemplate measures to reduce and/or offset emissions that are created as part of the drive for increased residential intensification. One way that it could do this is through the promotion or protection of green space either by private property owners or by local government. We know that in Christchurch, intensification of residential properties often comes at the expense of existing green space and green assets e.g. trees, with limited/no requirement to reinstate or replace these meaningfully. Proposed changes as part of the Resource Management (Enabling Housing Supply and Other Matters) Amendment Bill will

	further reduce the need for landscaping from a minimum of 20% of site coverage to no minimum. A sole focus on housing growth can resulting in poor social, environmental and economic wellbeing outcomes. Poorly planned and rapid greenfield expansion locks in a legacy of high input and high footprint, neighbourhoods and homes. Development must be integrated with transport and infrastructure and be designed to reduce the need for private vehicles (e.g. 15 minute neighbourhoods and growth in areas with existing infrastructure and around key activity centres).
34. What more do we need to do to promote urban intensification, support low-emissions land uses and concentrate intensification around public transport and walkable neighbourhoods?	The government's drive for increased residential intensification is understood. More work needs to be done to understand the impacts on emissions – as above, the data is not yet well understood. The recently-announced Resource Management (Enabling Housing Supply) Amendment Bill will, if enacted, enable increased residential density of up to three houses, of up to three storeys, on single sections across Tier 1 urban areas. Where previously councils focused increased residential density around public transport corridors and within walking distance of key activity centres, the blanket city-wide approach proposed in the Bill will lead to new development away from public transport and key activity centres, contrary to the goals of increasing public and active transport uptake and reducing emissions. To be more efficient and consistent, we encourage the development of national tools and approaches that can help decision making at the local level (e.g. tools that help understand the environmental footprint of urban development decisions). One such tool (Envision Scenario Planning Tool) has been developed by Canterbury University through the National Science Challenge – Better Homes Towns and Cities programme.
35. Are there any other views you wish to share in relation to planning?	The Discussion Document emphasises a need for a joined-up approach between central and local government to decrease emissions (p.18, p.57): "To get started, we need to empower central and local government, iwi/Māori, communities and business to … collaborate on a multi sector approach to reducing emissions …" (p.18). However, it is clear that there are overlapping objectives between the emissions reduction programme and other key work underway such as the programme of Resource Management Act reform; National Policy Statement on Urban Development; and the recently announced changes to medium density as part of the Resource Management (Enabling Housing Supply and Other Matters) Amendment Bill.

	Further work is needed to explore and resolve the apparent tensions in national direction and policies. The Council recognises that there are challenges in achieving multiple objectives; greater understanding of how these policies will integrate is needed. For example, actions to increase housing supply by building up and out can create a tension with actions to reduce greenhouse gas emissions and protect productive land, if urban areas sprawl outwards. In addition, direction to intensify existing residential areas can come at the expense of trees and greenspace – key assets in the pursuit of emissions reduction. The Government needs to provide strong support for local government decisions on land use and transport/infrastructure integration, for example by prohibiting urban development outside of designated growth corridors, and addressing housing pressures first and foremost through increased density. The National Policy Statement on Urban Development has encouraged a number of plan changes (approximately 20) in Selwyn District for Greenfield residential urban expansion. If these are approved they will increase housing supply - however they will also increase emissions from transport because of their greenfield location. We need to consider the emission and resilience implications of planning decisions and the potential for low carbon adaptation options. Designing infrastructure with both an adaption and resilience lens will be more cost effective.
Research, science and innovation	
General comments	
36. What are the big challenges, particularly around technology, that a mission-based approach could help solve?	Data, both private and public data required to inform and stimulate ideas. Attracting the right people into the mission; these need to be a combination of both public and private sector – but let industry lead, supported by government. This cannot just be the same players – ensuring this is not only Wellington focused, the regions need to be empowered. There needs to be an open knowledge base. Rapid prototyping should be promoted, and successful initiatives scaled. De-risk the environment.
37. How can the research, science and innovation system better support sectors such as energy, waste or hard-to-abate industries?	Required at a regional level. RSI to support local government and economic development agencies who have the knowledge and the relationships at a regional level.
38. What opportunities are there in areas where Aotearoa has a unique	Research into solutions for agricultural emissions are one area Aotearoa has a unique advantage with innovation hubs such as those in Lincoln already looking into

global advantage in low-emissions abatement?	solutions which could have local, and then global benefits. Green power, hydro power. Geographic variances allow us to trial different approaches. Aotearoa's size supports rapid delivery and accelerated innovation. City and regional councils have the opportunity to collaborate with industry to come innovative technologies and products as well as opportunities to co-create scalable solution.
39. How can Aotearoa grow frontier firms to have an impact on the global green economy? Are there additional requirements needed to ensure the growth of Māori frontier firms? How can we best support and learn from mātauranga Māori in the science and innovation systems, to lower emissions?	Show the pathways to success in order to grow frontier firms. Help them to think 'big' – that the opportunities are global. Create genuine collaborations between start-ups and established industry players. Encourage local government, economic development agencies and regional councils to support frontier firms trailing new technology and products. E.g. Use of red zone land in Christchurch, access to waste streams etc. Fit for purpose procurement processes to support emerging technology and products are required.
40. What are the opportunities for innovation that could generate the greatest reduction in emissions? What emissions reduction could we expect from these innovations, and how could we quantify it?	Regions have a good handle on their local innovation community. Support the establishment of cohorts that are already working together to solve these problems – such as agriculture, transport, waste, energy etc.
41. Are there any other views you wish to share in relation to research, science and innovation?	ChristchurchNZ has a clustering programme of 'supernodes' which could be leveraged to support transitioning to a low emission and climate resilient future. One of the supernodes specially targets Food, Fibre and Agritech. There is an opportunity to develop a regional or national 'Digital Twin' (essentially a 3D virtual model of an area including the built environment). This would provide an ability to combine complex and previously disparate datasets and perform simulations that could help support the adoption of new and more sustainable technology and approaches.
Behaviour change	
General comments	It is vital that Central Government leads a national awareness raising and education campaign about climate change and the need to act. This will need to be a significant and sustained effort, much like efforts to reduce harm on our roads or smoking. This campaign should appeal to core kiwi values and have a clear and simple call to action – linked to support available nationally to take action. It should also share stories of a diverse range of people taking action - businesses, households, communities, schools, iwi and farmers. Local government can help supply stories and case

	studies and foster connections with local networks and groups. A good example of a joined-up national approach is the Road Safety Strategy "Road to Zero" https://www.nzta.govt.nz/safety/what-waka-kotahi-is-doing/nz-road-safety-strategy/ which has a combination of advertising, resources, partnership programmes, grant funding, programme development and implementation. This, plus a multi-year commitment of resources over decades, would be the minimum order of magnitude required. The effectiveness of Government funded public campaigns like Genless should be measured in terms of the practical outcomes achieved – we believe the Genless advertising is confusing and may not be resulting in awareness or behaviour change. It may also only be appealing to those already active. The Mercury Energy 'say goodbye' campaign, is delivering a much clearer call to action for a wider audience (focused on electric vehicles). We support the concept of a behaviour change fund to allow organisations throughout New Zealand reach audiences at the local level in innovative ways. It will be important that this fund has sound measures of success and aids wider learning from the projects supported (to enable the sharing of good practice). It will be vital that MfE adopts enabling fund management processes to keep transaction costs low for organisations who apply and for MfE.
42. What information, tools or forums would encourage you to take greater action on climate change?	The science of climate change and sustainability (e.g. the challenges and solutions) must be taught in schools as part of the NZ Curriculum. If we are not equipping future generations with this core knowledge, then we will fail to make the lasting and transformational changes needed. This was a core demand from the recent School Strike for Climate – to include climate change in the curriculum. Schools can also be role models of sustainability for their students and their communities. This can be achieved by the way schools are designed and operated, as well as the way learning is shared with students and the community. For example, all schools should manage their waste, be energy efficient, encourage sustainable travel behaviours, conserve water and encourage the growing and eating of healthy food. Schools and early childcare centres operating in this way will be powerful community education facilities.

	Schools can also deliver community education through evening classes and courses. This previously occurred with the help of government funding for community education. An example of this was the Household Sustainability courses taught by community facilitators, trained by the Sustainable Living Education Trust.
43. What messages and/or sources of information would you trust to inform you on the need and benefits of reducing your individual and/or your businesses emissions?	A variety of different messengers will be required to reach different sectors of the community. As shown with the vaccination campaign, a strong central government campaign will work for many people, but other and more local voices are needed to reach everyone. Local government and local community and business groups are best placed to lead and coordinate local efforts. Positive case studies and stories of action taken by households, schools, communities, businesses, iwi and councils will be vital to grow momentum and encourage others to act. We need plenty of different forums to share, celebrate and encourage positive action. These stories could be collected and curated nationally and send out to key networks to share with their communities. Partnerships with mainstream media will need to be fostered e.g. "The Forever Project " run by Stuff is a useful way to share stories. Behaviour change is not the same as mass marketing. The Warm-up Kiwi Homes insulation subsidy or the EV Rebate are essentially behaviour change approaches. These specific and practical approaches should continue or be expanded and be complemented by a wider communications approach that encourages uptake. Understanding and responding to core barriers will be vital for successful behaviour change. National-level research could be undertaken and shared with local government and key influencers to more efficiently support local delivery.
44. Are there other views you wish to share in relation to behaviour change?	We support the efforts to establish a fund to drive behaviour change, but it's important to continuously compare this type of investment to walking and cycling infrastructure or public transport investment, which will enable and underpin the behaviours sought. The government's current approach is silent on the need to eat healthy, local and low carbon food choices.
Moving Aotearoa to a circular economy	
General comments	We agree with the core principles of a circular economy MfE have set out, but would add that the system would need to be powered by renewable energy for it to be sustainable. The Ellen Macarthur Foundation is a leader on circular economy approaches and have formed useful

	partnerships with industry and have guidance for governments. Circular economy approaches must apply to the biological cycle and the industrial cycle of products. The current approach proposed by government focuses only on the bioeconomy. To address the industrial cycle, more emphasis is needed on product stewardship and lifecycle responsibilities.
45. Recognising our strengths, challenges, and opportunities, what do you think our circular economy could look like in 2030, 2040, and 2050, and what do we need to do to get there?	We support the Government exploring and supporting circular economy approaches in New Zealand because of the many benefits that would be delivered. Local social enterprises offer some great examples of purpose driven businesses delivering more sustainable outcomes. For example, Cultivate Christchurch grow food in the central city, deliver food to local cafes using an electric bike and collect and compost food scraps to feed the soil where the food is grown. Kilmarnock Enterprises also provides local recycling solutions through the ethical employment of people with disabilities.
46. How would you define the bioeconomy and what should be in scope of a bioeconomy agenda? What opportunities do you see in the bioeconomy for Aotearoa?	The Climate Commission's definition on page 49 is fine. New Zealand should be leaders in the Bioeconomy and related technologies. An example of fostering opportunities in this sector is reflected in the Christchurch NZ Supernodes programme. Canterbury is positioning itself as a centre of excellence for the Food, Fibre, and Agritech sectors.
47. What should a circular economy strategy for Aotearoa include? Do you agree the bioeconomy should be included within a circular economy strategy?	The bioeconomy can form part of the circular economy, but the concept of the circular economy itself needs to be wider – ultimately covering concepts that can be applied to the entire economy.
48. What are your views of the potential proposals we have outlined? What work could we progress or start immediately on a circular economy and/or bioeconomy before drawing up a comprehensive strategy?	
49. What do you see as the main barriers to taking a circular approach, or expanding the bioeconomy in Aotearoa?	The significant proportion of products that are manufacturing offshore limits our ability to influence the design, regulate brand owners and limits our ability to reprocess products or resources. In order to have a local circular economy local manufacturing will be important.
50. The Commission notes the need for cross-sector regulations and investments that would help us move to a more circular economy. Which regulations and	

investments should we prioritise (and why)?	
51. Are there any other views you wish to share in relation to a circular economy and/or bioeconomy?	
Transitioning Key Sectors	
Transport	
General comments	Most of the proposals to reduce transport emissions would be supported by local governments across New Zealand. The big issue is the lack of funding to make the changes required. There are also very few details on how the proposed transport emissions targets will be achieved. The government needs to work more closely with local government on the types of policies that are needed, and provide far greater funding for implementing them. Transport is another area which would benefit from clearer prioritisation of actions. Which actions will be most efficient (and cost effective) in reducing emissions, and how will they be implemented? A paradigm shift in the way the transport system is funded in New Zealand will also be required to enable the scale of change required. While the role out of essential low-emission transport infrastructure needs to be fast tracked, there needs to be an acknowledgement that we can't simply build our way out of this with a series of enormous and expensive infrastructure projects – many of which will do little to actually reduce our overall emissions.
We are proposing **four new transport targets** in the emissions reduction plan, and are seeking your feedback.	
52. Do you support the target to reduce vehicle kilometres travelled by cars and light vehicles by 20 per cent by 2035 through providing better travel options, particularly in our largest cities, and associated actions?	We support this target. Note, our draft transport emission reduction calculations indicate that we will need to reduce vehicle kilometres travelled (VKT) in Christchurch City by 24% by 2030 to meet our net-zero emissions goal by 2045. While our target is slightly more ambitious, the Emissions Reduction Plan target roughly aligns to ours and is considered suitable. We support the associated actions, and we have the following additional comments: 1. On page 67, the plan says: "*In the first budget period, we will: make regulatory changes to streamline public consultation requirements and*

	make it easier for councils to trial street/road changes that support travel by public transport, walking, and cycling, including low-traffic neighbourhoods." We would welcome central government influence to support the Council to initiate such changes. We strongly support these actions, but there is a lack of detail proposed here. We suggest additional detail here to show how this would happen. 2. On page 66, the plan says "*In the first budget period, we will: substantially increase funding for cycling and walking improvements".* The current 2021-2024 National Land Transport Programme (NLTP) allocates only $910m to walking and cycling improvements, or 4% of the total NLTP expenditure. Does this mean the Ministry of Transport (MoT) will aim to propose a much higher proportion of expenditure for walking/cycling improvements? The current NLTP still allocates a majority of funds to road uses, continuing our dependence on motor vehicles. We therefore also support the identification of higher public transport service and infrastructure funding. The current 2021-2024 NLTP allocates $4,900m to public transport, or 20% of the total NLTP expenditure. We hope to see specific and significant increases to the funding proportions detailed. To achieve the targets, the government needs to re-prioritise away from road funding and towards active and public transport. 3. The plan proposes the development of a national public transport network. We support these efforts, but we advocate for higher priority of action within urban centres in the short term. We support development of a national public transport network in the long term as there is a need to establish and increase public transport frequency to urban centres outside Greater Christchurch to enable sustainable tourism. We are seeking detail for this action. 4. We support providing free public transport for community service and gold card holders as well as secondary and tertiary students. This will help to embed desirable low emission behaviours and help address equity issues. 5. Christchurch was not specifically mentioned in the congestion pricing actions. Congestion pricing is an initiative that Christchurch City is interested in investigating, and we would welcome assistance and legislative support in this area 6. On page 69, the plan seeks to *"Require further roadway expansion and new highways to be*

	consistent with climate change targets". We support this goal, but it may not be specific enough to ensure the desired outcomes. Restricting 'roadway expansion' is vague, and it's not clear what projects would meet this criteria. There is also a missed opportunity here to restrict the space allocated to parking or vehicular traffic on new roads (non-highway). This might be best suited as an additional action. For focus 1, an additional action with a clear requirement to follow the road design standards within the Aotearoa Urban Street Planning & Design Guide might be useful. A clear requirement to follow the guide could enable councils to follow through on best practice road designs. The status quo still involves road designs that allocate a significant amount of space to parking and vehicular traffic. Finally, there needs to be a greater acknowledgement of the impacts that working from home can make on transport emissions reduction. The recent lockdowns have shown that many people are able to work from home, and MBIE could provide information and support for businesses who wish to explore more flexible work options for staff.
53. Do you support the target to make 30 per cent of the light vehicle fleet zero-emissions vehicles by 2035, and the associated actions?	Yes we support this target and the associated actions, and would support an earlier target date if the government introduced further policies and incentives to assist more people to purchase zero-emissions vehicles. More promotion of the savings consumers can gain from driving an EV (compared to paying for petrol/diesel), combined with the need for less servicing and maintenance could encourage more people to consider purchasing an EV. While the focus on electric vehicles is important, our key focus at Christchurch City Council is on mode-shift (focus 1). We recommend expanding the proposed e-bike purchasing/support scheme to all New Zealanders, not just for those with lower incomes. A widespread e-bike subsidy will be an important (and relatively inexpensive) policy lever that will allow us to tackle health challenges as well as transport challenges. Currently rules related to the location and number of petrol stations is extremely permissive. The government could also investigate mechanisms to limit on new petrol stations as the transition towards an electric fleet progresses. A ‘sinking lid’ type approach may work to help encourage the transition. An even bolder approach

	could be to ban fossil fuel advertising and sponsorship – similar to the approach previously taken with smoking.
54. Do you support the target to reduce emissions from freight transport by 25 per cent by 2035, and the associated actions?	Yes, we support this target and the associated actions. In addition we suggest setting a 2032 target for all new and used imported light and heavy duty trucks to be zero exhaust emission vehicles - i.e. no new or used petrol, diesel, hybrid and plug-in hybrid vehicles to be imported after that date. To support this we suggest implementing a clean truck discount (feebate) scheme for imported, new and used light and heavy duty trucks by the earliest practicable date - focusing on providing a rebate discount for zero exhaust emission, trucks and a fee for imported, new and used petrol, diesel, hybrid and plug-in hybrid vehicles. Greater effort is also needed to encourage freight to move from trucks to rail and coastal shipping, and to optimise freight logistics to ensure full loads and efficient vehicle operation.
55. Do you support the target to reduce the emissions intensity of transport fuel by 15 per cent by 2035, and the associated actions?	Yes, we support this target and the associated actions. This will be important because New Zealand has an old vehicle fleet, and will reduce emissions for those not yet able to purchase electric vehicles.
56. The Climate Change Commission has recommended setting a time limit on light vehicles with internal combustion engines entering, being manufactured, or assembled in Aotearoa as early as 2030. Do you support this change, and if so, when and how do you think it should take effect?	We support a ban on importing, manufacturing, or assembling internal combustion light vehicles by 2030, in line with the United Kingdom - i.e. no new or used petrol, diesel, hybrid or plug-in hybrid vehicles to be imported or manufactured locally after that date. The ban on internal combustion vehicles could be supported by an increase in the feebate scheme to improve affordability, and take place alongside a suite of other measures to improve uptake of active and public transport, and improve the equity of the transport system.
57. Are there any other views you wish to share in relation to transport?	Christchurch City Council broadly supports the mode-shift actions identified, but we would need these actions to be fully detailed, legislated, and implemented if we are to reach the specified targets. • We require a significant increase in funding allocation towards walking, cycling, and public transport service and infrastructure in the National Land Transport Fund (NLTF). • Often road trial projects face increased public concern when they are funded by local rates. In order to implement more trials, we require increased central government funding and directive legislation to implement these trials to achieve the significant amount of road space reallocation needed to achieve the specified targets. In addition to trials, we need additional funding support and increased design direction to enable successful non-trial projects.

	Specifically, we support working to implement the designs within the Aotearoa Urban Street Planning & Design Guide. Strong and clear directives to follow these guidelines will enable us to follow through on best practice designs during the engagement process. • We require increased detail surrounding the actions to restrict 'further roadway expansion' and require 'impact assessments'. Without clear and directive commitments, there is a risk that these actions will not result in emission reductions. We suggest utilising California Senate Bill 743 as an example of how to effectively direct a change in transport and land use assessment. We require central government to direct a clear change to using vehicle kilometres travelled as opposed to level of service in transportation assessments or emissions impact assessments. • A key barrier to cycling is safety. In Europe and North America, a greater legal duty of care is placed on vehicle drivers in relation to any collisions with pedestrians and cyclists. Improving the legal protection in New Zealand for our most vulnerable travellers (i.e. walkers and cyclists are not protected by the steel structure of a vehicle) would help to create safer streets for all road users and enable low emission mobility. • Fines for parking in bus lanes need to be amended to better reflect the disruption caused to travellers. Currently driving in a bus lane has a greater penalty than parking in a bus lane, yet the disruption to the bus service is far greater for the parking infringement. We also propose these additional actions and targets: • We recommend the Government requires all new residential housing to have electric vehicle charger infrastructure installed as soon as is practicable and to consider providing financial support towards the installation of electric vehicle chargers at residential homes and at residential developments, also as soon as is practicable. • Incentives for battery electric car share and bike share schemes within developments. • We ask the Government to implement a national number plate recognition system that can be used by councils and organisations, to identify pure electric, zero exhaust emission, vehicles, in order for these vehicles to be easily distinguished from petrol, diesel, hybrid and plug-in hybrid vehicles. This recognition system is required for the potential establishment of future zero emission zones and for access incentives

	for pure electric, zero exhaust emission, vehicles and for the potential use of pricing mechanisms. • We recommend establishing a voluntary vehicle scrappage scheme to encourage the recycling of old, unsafe and polluting vehicles manufactured prior to a defined date. Ideally this scrappage scheme would be linked to an incentive for zero exhaust emission mobility options (e.g. electric bikes, scooters or vehicles) as has proved successful in Europe. • We also support a target date to be set for all new small passenger, coastal fishing and recreational vessels to be zero exhaust emissions. • The Council recommends a clean discount (feebate) scheme for imported new and used off-road vehicles and construction equipment, focusing on providing a rebate discount for pure electric, zero exhaust emission, off-road vehicles and construction equipment and a fee (i.e. no rebate) for imported new and used petrol, diesel, hybrid and plug-in hybrid off-road vehicles and construction equipment. We would support these coming into place as soon as practical. • We recommend that as soon as the allocation of rebates and fees in the clean car discount scheme is reviewed, the focus should move to a rebate discount for imported new and used pure electric, zero exhaust emission, vehicles and a fee (i.e. no rebate) should be used for imported new and used petrol, diesel, hybrid and plug-in hybrid vehicles. • Options for encouraging working from home, distance learning and the use of technology to avoid the need for travel (e.g. remote zoom meetings) should be explored to help reduce emissions in a cost-effective way.
Energy and industry	
Energy strategy	
General comments	Outcome based targets are preferred to technology specific approaches. All technologies should be considered and evaluated for those with provide the best value from a sustainability, cost, and reliability perspective. The government needs to rapidly increase investment in renewable energy as New Zealand is currently going backwards - the percentage of renewable energy in our network is recently declining. A significant part of our net zero transition pathway is to electrify more of our transport and industry – this is a key challenge for government to address which underpins the transition to a low – emission economy.
58. In your view, what are the key priorities, challenges and opportunities that an energy	The delivered cost of electricity to consumers is important for both residential and commercial and industrial consumers. Energy affordability in the

strategy must address to enable a successful and equitable transition of the energy system?	residential market ensures living costs and transition costs are minimised. Low electricity costs lead to people being able to heat their homes and remain healthier. Commercial and industrial consumers need electricity to be less expensive than fossil fuel alternatives, so that the transition is economically viable (with or without govt funding). The energy network needs to be viewed as an interconnected system. A reduction of one energy source either through scarcity or high prices will increase the use of another. For example, increasing the cost of electricity may delay electrification projects and prolong the use of coal and gas. Retaining some thermal generation capacity for a few more years may allow direct users of fossil fuels to transition and reduce emissions quicker than if thermal generation is decommissioned early and transition projects don't go ahead due to high electricity prices. We need to ensure that energy is affordable enough to facilitate social development, secure and reliable, whilst ensuring that the source of energy is becoming cleaner over time.
59. What areas require clear signalling to set a pathway for transition?	Any phasing out of fossil fuels and price paths for ETS. A clear price path for ETS (e.g. 20 years) will enable consumers to have confidence in cost projections to enable transition projects to succeed.
Setting targets for the energy system	
60. What level of ambition would you like to see Government adopt, as we consider the Commission's proposal for a renewable energy target?	The target should be set based on both what is needed to meet emissions targets as wells as what is practical and feasible to implement today. Large reductions in fossil fuels can be met with today's technology. Large scale investment in hot water heat pump technology, for example, in residential homes would both reduce significantly residential electricity consumption, which would also allow thermal generation assets to be retired, and would reduce electricity prices for everyone (due to tranche-based electricity pricing in NZ).
Phasing out fossil gas while maintaining consumer wellbeing and security of supply	
61. What are your views on the outcomes, scope, measures to manage distributional impacts, timeframes and approach that should be considered to develop a plan for managing the phase out of fossil gas?	Most residential uses of fossil gas can already be economically electrified at today's prices. Most of the South island does not use gas (including LPG) for water heating and cooking and space heating (they use electric stoves and electric hot water cylinders). However, careful planning will be needed to manage peak loading and electricity network requirements.

	For commercial and industrial consumers, the end uses of gas can either be replaced with direct electrification, heat pumps or biofuels with varying economics. Strong ETS pricing signals combined with Government Investment in Decarbonising Industry (GIDI) - similar co-funding should enable commercial and industrial consumers to make feasible cases for transition to low carbon fuels. While this might not completely eliminate all fossil gas uses, it will take care of a significant proportion. Some fossil gas may be beneficial in the electricity system for a longer time frame, as it is used in fast-acting peaking plants, which can enable broader uptake of wind and solar generation (displacing coal and baseload gas which are more carbon intensive). This might only comprise 5% or less of electricity generated.
Decarbonising the industry sector	
62. How can work under way to decarbonise the industrial sector be brought together, and how would this make it easier to meet emissions budgets and ensure an equitable transition?	Effective planning and market signals are needed to ensure an adequate supply of electricity and biofuels are available at a price point which enables transition. Continuation of GIDI co-funding for reduction of industrial emissions is critical to assist large businesses to decarbonise. Many businesses can, and are already looking to transition to low carbon energy sources without funding assistance due to increasing fossil fuel prices (gas) and increasing ETS unit prices.
63. Are there any issues, challenges and opportunities for decarbonising the industrial sector that the Government should consider, that are not covered by existing work or the Commission's recommendations?	Expansion of the scope of GIDI and other programmes to consider any projects which reduce gross CO2 emissions on a competitive $/tCO2 basis could help accelerate the transition.
Addressing current data gaps on New Zealand's energy use and associated emissions through an Energy and Emissions Reporting scheme	
64. In your view, should the definition of a large energy user for the purposes of the proposed Energy and Emissions Reporting scheme include commercial and transport companies that meet a specified threshold?	Yes
65. We have identified a proposed threshold of 1 kt CO_2e for large stationary energy users including commercial entities. In your view, is this proposed threshold	This threshold will likely provide the data resolution needed to improve the emissions data currently held by the govt. However, it would not necessarily form a solid basis for ongoing decarbonisation support of large emitting businesses, as this would be better supported through

reasonable and aligned with the Government's intention to meet emissions budgets and ensure an equitable transition?	contestable funding on a $/tCO2e abated metric. This will enable all low hanging fruit (from a gross emissions reductions perspective) to be addressed first.
66. In your view, what is an appropriate threshold for other large energy users such as transport companies?	
67. Are there other issues, challenges or opportunities arising from including commercial and transport companies in the definition of large energy users for the purposes of the proposed Energy and Emissions Reporting scheme that the Government should consider? Supporting evidence on fleet size and characteristics is welcomed.	
Supporting development and use of low-emissions fuels	
68. What level of support could or should Government provide for development of low-emissions fuels, including bioenergy and hydrogen resources, to support decarbonisation of industrial heat, electricity and transport?	Govt should back development of low-emissions fuels based on outcomes – and competitive targets for those technologies that are supported. For example, specific price points for fuels (to enable mass uptake) should be considered. Rigorous studies on the likely costs of alternative fuels should be carried out as any money spent on fuels which will not have meaningful uptake will take funding away from projects that will reduce carbon.
69. Are there any other views you wish to share in relation to energy?	
Building and construction	
General comments	Retrofitting programmes for residential and commercial buildings will be vital since most of the buildings needing to reduce emissions already exist. The Plan should place greater emphasis on retrofitting as this can deliver a wide range of co-benefits and enable a just transition / equity approach. For example, the Warmer Kiwi Homes programme should continue and be expanded to a wider range of solutions able to make homes more energy efficient. A warm, dry home that is cheaper to run greatly supports low and fixed income households.
70. The Commission recommended the Government improve the energy efficiency of buildings by introducing	Introducing mandatory participation in energy performance programmes for existing commercial and public buildings is a great opportunity for the Government to show leadership by adopting the

mandatory participation in energy performance programmes for existing commercial and public buildings. What are your views on this?	frameworks (Embodied and Operational) ahead of the private sector. This is not a new proposal, as it was briefly mentioned in both Frameworks from the Building for climate change programs, Chapter 6, 'Approach'. This would be a good approach. NABERSNZ should be mandatory for all Govt buildings immediately followed by commercial buildings over an acceptable time period.
71. What could the Government do to help the building and construction sector reduce emissions from other sectors, such as energy, industry, transport and waste?	The most crucial step would be to increase standards within the New Zealand Building Code – to improve energy performance and incorporate embodied carbon and lifetime considerations. Industry tools and training would then be needed to equip the building sector with the ability to meet these needed higher standards. Off-site manufacturing presents significant opportunities to improve the performance of buildings and to reduce waste, energy and transport associated with construction. Rules and regulations need to enable high performance prefabrication.
72. The Building for Climate Change programme proposes capping the total emissions from buildings. The caps are anticipated to reduce demand for fossil fuels over time, while allowing flexibility and time for the possibility of low-emissions alternatives. Subsequently, the Commission recommended the Government set a date to end the expansion of fossil gas pipeline infrastructure (recommendation 20.8a). What are your views on setting a date to end new fossil gas connections in all buildings (for example, by 2025) and for eliminating fossil gas in all buildings (for example, by 2050)? How could Government best support people, communities and businesses to reduce demand for fossil fuels in buildings?	We support ending new fossil gas connections by 2025. Eliminating fossil gas in all buildings could be achieved sooner than 2050, (e.g. 2030) to align with the date when government is proposing to achieve a 100% renewable electricity supply. The date to end expansion of fossil gas pipelines should be brought forward as electric heating/cooling/cooking solutions in general, have operational cost parity with fossil gas solutions. Bio-gas made from sustainable sources could be a useful transition from liquid petroleum gas.
73. The Government is developing options for reducing fossil fuel use in industry, as outlined in the Energy and industry section. What are your views on the best way to address the use of fossil fuels (for example, coal, fossil gas and LPG) in boilers used for space	The use of Fossil fuels in building should be strongly discouraged (e.g. taxed until eventually banned). To replace fossil gases, three major methods have emerged overseas, as practical solutions to the continued reliance on fossil fuels: - bio-methane, a renewable gas produced by the fermentation of organic matter mostly derived from farms; (same appliances can be used, with an adaptor to burn the gas properly);

and water heating in commercial buildings?	- pyro-gasification, a technology that converts wood into gas; and - methanation, which uses electricity to produce hydrogen and then methane. Each of these methods, or resources, reduce atmospheric emissions, generating electric power for engines and turbines, and thus they offer more ecologically sound possibilities to the use of fossil fuels. - We need to replace natural gas by bio gas. - Replace coal boilers by pellet burner (co-generation: generating electricity and hot water) or other source of renewables. In general most fossil fuel based heating systems in buildings have higher operational costs than low carbon alternatives. No new buildings should use fossil fuels for heating. Possibly there needs to be a GIDI type model to retrofit (where appropriate) low carbon heating systems into existing buildings.
74. Do you believe that the Government's policies and proposed actions to reduce building-related emissions will adversely affect any particular people or groups? If so, what actions or policies could help reduce any adverse impacts?	Everyone will be impacted by these changes, the poor and vulnerable even more so. Protecting them in particular will need to be a priority. For residential properties, landlords have no incentive to install systems with low operational costs. This disadvantages tenants who are unable to pay for and install lower operational cost systems. Additionally, if a landlord was required to upgrade the heating system, they might try to pass this cost on to the tenant. Ideas around how to address this should be considered as part of the plan.
75. How could the Government ensure the needs and aspirations of Māori and iwi are effectively recognised, understood and considered within the Building for Climate Change programme?	Include a diversity of representation in related programme steering groups and working groups – give Maori a seat at the table and a voice in decision making.
76. Do you support the proposed behaviour change activity focusing on two key groups: consumers and industry (including building product producers and building sector tradespeople)? What should the Government take into account when seeking to raise awareness of low-emissions buildings in these groups?	The government's priority should be to raise minimum standards for buildings and to support industry with tools and training to achieve these new standards. The next priority should be to develop tools and approaches that enable informed decisions to be made when designing, building, buying or renting properties. Currently people are making decisions with limited information. Tools such as Energy Performance Certificates, Homestar, Greenstar, NABERS, ISCA and LCA Quick provide useful information at certain phases of the building lifecycle. Raising demand for high performance buildings will be important (i.e. educating customers). However, the

	building industry are effectively advisors to their customers. Giving industry professionals the skills and capability to deliver sound advice and higher performing buildings will be vital. One example of this would be to have approved design solutions that are energy efficient, low carbon and easy to consent.
77. Are there any key areas in the building and construction sector where you think that a contestable fund could help drive low-emissions innovation and encourage, or amplify, emissions reduction opportunities? Examples could include building design, product innovation, building methodologies or other?	The industry urgently needs free online tools (promised by MBIE in the Program for climate change framework operational page 8.) - free training - Free advice. - Free EPC (Energy Performance Certificate) Contestable funding for specific technologies – e.g. hot water heat pumps. To enable mass uptake in existing buildings.
78. The Ministry of Business, Innovation and Employment (MBIE) is considering a range of initiatives and incentives to reduce construction waste and increase reuse, repurposing and recycling of materials. Are there any options not specified in this document that you believe should be considered?	Emphasize the need to use lean design methods and quantity surveyors to minimise wastage from construction. Tools like the BRANZ managed Resource Efficiency in Building Related Industries can help with the systems and processes needed to minimise waste from demolition and construction. - Tools to more accurately measure the materials needed. - Encourage companies to take back (& refund) material not used on site. - Producer responsibility - make building material suppliers deal with theirs product waste, after use. - No GST or low % GST on recycled materials.
79. What should the Government take into account in exploring how to encourage low-emissions buildings and retrofits (including reducing embodied emissions), such as through financial and other incentives?	
80. What should the Government take into account in seeking to coordinate and support workforce transformation, to ensure the sector has the right workforce at the right time?	
81. Our future vision for Aotearoa includes a place where all New Zealanders have a warm, dry, safe and durable home	Encourage innovation in the building sector. Off-site manufacturing when widely adopted can deliver significant benefits, improve energy performance, reduce

to live in. How can we ensure that all New Zealanders benefit from improved thermal performance standards for our buildings?	waste, minimise transport to a building site and cut costs and carbon.
82. Are there any other views you wish to share on the role of the building and construction sector in the first emissions reduction plan?	The government should do more to encourage the use of low emission building materials, such as wood. This could also support the local economy, by utilising the increase in pine plantations.
Agriculture	
General comments	Canterbury is a centre of excellence for innovation in the Food and Fibre sector (see Food, Fibre and Agritech Supernode). New Zealand stands to gain significantly by creating local and globally needed solutions. This will be a vital part of our bio and knowledge-based economies. Government investment in this area can unlock a huge potential – this opportunity needs to be properly scoped and priced to enable further investment and support in this area
83. How could the Government better support and target farm advisory and extension services to support farmers and growers to reduce their emissions?	Advisory services are a vital way to support farmers adopt good practice, but so too are field days and learning events hosted by leading farmers, such as those provided by Quorum Sense – the NZ regenerative farming network. Working through farmer networks supports peer to peer learning of best practice.
a. How could the Government support the specific needs of Māori-collective land owners?	
84. What could the Government do to encourage uptake of on-farm mitigation practices, ahead of implementing a pricing mechanism for agricultural emissions?	Signalling that unavoidable pricing mechanisms are coming soon will incentivise action before pricing kicks in. Delaying the introduction of pricing, or signalling weak pricing will further delay action. Re-establishing the Projects to Reduce Emissions Scheme, instead of offsetting using only forestry, presents wider opportunities for innovation across many sectors including farming.
85. What research and development on mitigations should Government and the sector be supporting?	The government should support all research and development able to reduce emissions from animals and other on-farm emissions. Support should also enable local plant-based industries to develop as an alternative to meat and milk production. New Zealand should be world leaders in these areas, and our efforts can help other agricultural producers reduce global emissions.
86. How could the Government help industry and Māori agribusinesses show their environmental credentials for low-	

emissions food and fibre products to international customers?	
87. How could the Government help reduce barriers to changing land use to lower emissions farming systems and products? What tools and information would be most useful to support decision-making on land use?	It is vital that New Zealand products are credible and trusted in the market place – standards on environmental performance, monitoring and eco-labelling are needed to ensure quality and protect our made in NZ brand.
88. Are there any other views you wish to share in relation to agriculture?	The government seriously needs to address agricultural emissions. One of the most effective ways to keep warming below 1.5C is to drastically reduce methane emissions in the next decade. New Zealand has an opportunity to be world leaders in developing technologies which help reduce agricultural emissions, and create a more sustainable agricultural sector.
Waste	
89. The Commission's recommended emissions reduction target for the waste sector significantly increased in its final advice. Do you support the target to reduce waste biogenic methane emissions by 40 per cent by 2035?	Yes, although such a significant reduction in methane emissions from waste, while desirable, is likely to have significant cost implications for local authorities and other operators of landfills. We consider that in order to meet this goal, it will be necessary to increase investment in this area including broadening how the waste- levy can be used to fund research, new infrastructure, capital works and equipment. Modern resource consented landfills should be required to capture and beneficially use landfill gas. Consequently, these provisions mostly relate to existing and historic landfills. The governments Projects To Reduce Emissions scheme was successful at supporting landfill gas collection projects and could be reinstated to help unlock the capital needed to establish these systems.
90. Do you support more funding for education and behaviour change initiatives to help households, communities and businesses reduce their organic waste (for example, food, cardboard, timber)?	Yes, we support more funding for national education and behaviour change initiatives, provided that this does not impact on the funding of successful local initiatives already underway.
91. What other policies would support households, communities and businesses to manage the impacts of higher waste disposal costs?	Bans on certain products and more effective and regulated product stewardship schemes, options identified in "Taking responsibility for our waste", Ministry for the Environment October 2021.

92. Would you support a proposal to ban the disposal of food, green and paper waste at landfills for all households and businesses by 1 January 2030, if there were alternative ways to recycle this waste instead?	Yes we would support this proposed ban, provided that there are alternative ways to recycle this waste and there are appropriate measures and resources to monitor and enforce compliance.
93. Would you support a proposal to ban all organic materials going to landfills that are unsuitable for capturing methane gas?	Yes, we support the proposal.
94. Do you support a potential requirement to install landfill gas (LFG) capture systems at landfill sites that are suitable?	Yes, we support this requirement for currently operating and new facilities. We also agree that such a requirement should not necessarily apply to closed landfills because of the high cost, relative to the limited benefits of capturing emissions through installing LFG systems on closed landfills. In addition alternative approaches and guidelines should be developed where mitigation of emissions outperforms LFG capture for energy.
95. Would you support a more standardised approach to collection systems for households and businesses, which prioritises separating recyclables such as fibre (paper and cardboard) and food and garden waste?	Christchurch City Council is one of only 5 local authorities which currently separate both recyclables and food and garden waste (for composting). However, we do not support a standardised collection method for materials because any approach should take into account local circumstances and consider best-fit collection systems. Noting that decisions regarding source separation or commingled divertible materials are best made locally and will differ due to scale, processing capacity and transportation logistics. Any system requirements need to recognise that what is appropriate for a large metropolitan area may not be practicable, or most efficient across the country. We do support greater consistency about the way materials are presented, such as lids off or the types of plastics collected – to make it simpler for residents and to enable synergies for processing the materials collected (e.g. regional recycling facilities).
96. Do you think transfer stations should be required to separate and recycle materials, rather than sending them to landfill?	Yes, we agree.
97. Do you think that the proposals outlined in this document should also extend to farm dumps?	Yes, we agree.
98. Do you have any alternative ideas on how we can manage	We would strongly support development of a National Environmental Standard for Disposal to Land, to address unlicensed disposal activities such as stockpiling and farm dumps. This approach would enable accurate data

emissions from farm dumps, and waste production on farms?	to collected and include standards for waste related emissions.
99. What other options could significantly reduce landfill waste emissions across Aotearoa?	Material bans and LFG capture and treatment systems could contribute to reduced emissions. LFG systems which generate energy need to be integrated with adequate infrastructure e.g. transmission lines so that there is suitable capacity to utilise the energy. For landfill and unlicensed disposal sites, where LFG capture is not feasible to install, alternative approaches such as sequestration via landfill capping approaches to also be considered with best practice guidance developed.
F-gases	
General comments	
100. Do you think it would be possible to phase down the bulk import of hydrofluorocarbons (HFCs) more quickly than under the existing Kigali Amendment timetable, or not?	
101. One proposal is to extend the import phase down to finished products containing high-global warming potential HFCs. What impact would this have on you or your business?	
102. What are your views on restricting the import or sale of finished products that contain high-global warming potential HFCs, where alternatives are available?	This should be introduced immediately whenever there are other options available.
103. What are your views on utilising lower global warming potential refrigerants in servicing existing equipment?	This should be strongly encouraged, and be mandatory as soon as lower global warming products are available at a similar price.
104. Do you have any thoughts on alternatives to HFC refrigerants Aotearoa should utilise (e.g., hydrofluoroolefins or natural refrigerants)?	
105. Can you suggest ways to reduce refrigerant emissions, in combination with other aspects of heating and cooling design, such as energy efficiency and building design?	Addressing end of life product use is a big gap in this sector – need standards to encourage / mandate the safe 'de-gassing' of heat pumps, fridges etc. at the end of the product's life. Otherwise powerful greenhouse gases are released onto the atmosphere when appliances are dumped and crushed.
Forestry	

General comments	
106. Do you think we should look to forestry to provide a buffer in case other sectors of the economy under-deliver reductions, or to increase the ambition of our future international commitments?	Yes, forestry could be used to both offset residual emissions in hard to abate sectors, and increase our international commitments. However, gross emissions reductions across all sectors should be the first priority – carbon forestry should not be seen as a way to avoid or delay moves to decarbonise the economy.
107. What do you think the Government could do to support new employment and enable employment transitions in rural communities affected by land-use change into forestry?	Provide training programmes for people to be employed in the forestry industry, and associated industries which add on-shore value to forestry products, or in the alternative low-emission jobs of the future.
108. What's needed to make it more economically viable to establish and maintain native forest through planting or regeneration on private land?	Greater financial incentives for private landowners - a price differential between exotic plantations and permanent indigenous forest is needed to better reflect the multiple benefits provided by native forests such as, biodiversity, surface and ground water quality, land stability and lower fire risk. Biodiversity loss and water quality are critical issues for New Zealand. Valuing these co-benefits will be needed if we are to encourage private landowners to plant, regenerate fence and predator control areas of native forest. Policy settings need to favour the regeneration of indigenous forests and the culture of government agencies needs to change to enable this. Making it easier, or more attractive to enter regenerating native forest into the ETS could provide a return for private land-owners to fence off marginal land and return it to native forest. Land owners are having difficulty getting naturally regenerating forests into carbon forestry schemes – the frameworks are not enabling. An example of this is difficulty in establishing a baseline when the marginal land is covered in gorse or broom for example (gorse is often cleared for pine plantation, but gorse can be a nursery crop for regeneration native forests).
109. What kinds of forests and forestry systems, for example long-rotation alternative exotic species, continuous canopy harvest, exotic to native transition, should the Government encourage and why?	Permanent indigenous forests provide multiple benefits and can be delivered at scale and are more aligned to our climate and ecological emergency.
a. Do you think limits are needed, for example, on different permanent exotic forest systems, and their	There should be limits on the scale of exotic plantations in some areas where permanent native forests would be more desirable.

location or management? Why or why not?	
b. What policies are needed to seize the opportunities associated with forestry while managing any negative impacts?	Government should enable a carbon price differential between pine and native forestry, to incentivise more permanent native forests. This could recognise the many co-benefits provided by indigenous forests. This could be supported by a biodiversity credit or premium (e.g. a carbon credit cap could be placed on exotic forestry and a price premium be applied to indigenous forest restoration). Mandated buffers (for example a requirement for permanent planting along waterways and coastlines) are needed around exotic forestry to help manage the impacts of logging on local waterways (e.g. tree slash flowing in to rivers and the sea).
110. If we used more wood and wood residues from our forests to replace high emitting products and energy sources, would you support more afforestation? Why or why not?	Yes, if we were using more wood, then we would need a local supply – otherwise we would suffer from deforestation.
111. What role do you think should be played by	
a. central and local governments in influencing the location and scale of afforestation through policies such as the resource management system, ETS and investment?	Central and local government should have a critical role in order to facilitate the best overall outcomes for New Zealand from forestry. Unfettered planting may have negative consequences for some communities which could be avoided through better planning and the right types of incentives, for the private sector to plant the most suitable trees, at suitable scale, in the right locations.
b. the private sector in influencing the location and scale of afforestation?	
112. Pests are a risk to carbon sequestration and storage in new, regenerating and existing forest. How could the Government support pest control/management?	The role of plant pest control (e.g. possum control), wetland and soil carbon storage is poorly considered and yet can provide significant benefits in NZ.
113. From an iwi/Māori perspective, which issues and potential policies are a priority and why, and is anything critical missing?	

114. Are there any other views you wish to share in relation to forestry?	Policy settings greatly favour exotic forestry (pine). This is exacerbated by high carbon prices. Pine forestry has obvious limitations – not long-term or permanent, monoculture crop diminishes biodiversity, the harmful impacts of logging (land stability and tree waste being washed away), and land can only sustain so many rotations of pine before it loses its ability to grow the crop (long crop rotations are needed).